

This Page Is Inserted by IFW Operations  
and is not a part of the Official Record

## **BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning documents *will not* correct images,  
please do not report the images to the  
Image Problem Mailbox.**

WHAT IS CLAIMED IS:

1. A data structure having a data area and its management area, wherein

data is stored in said data area in a form of one  
5 or more objects,

each said object includes one or more data units,  
said data unit includes record information in a  
form of one or more packs, said record information  
being presented within a prescribed period of time,

10 said management area includes management  
information for managing said objects,

said management information includes program chain  
information for specifying an order of presentation of  
said objects, and

15 said program chain information includes one or  
more pieces of cell information,

and wherein said cell information has an area for  
describing information of one or more entry points,  
each said entry point indicating a position to enter  
20 said record information.

2. The data structure of claim 1, wherein the  
information of said entry point includes primary text  
information.

3. The data structure of claim 1, wherein said  
25 primary text information includes at least one of an  
information type, information date and text  
information.

4. The data structure of claim 1, wherein the information of said entry point includes entry point type information.

5       5. The data structure of claim 1, wherein said cell information includes cell general information, and said cell general information includes information indicating a number of pieces of the entry point information.

10       6. The data structure of claim 1, wherein said program chain information includes one or more pieces of program information, and

      said program information includes primary text information.

15       7. The data structure of claim 6, wherein said primary text information includes at least one of an information type, information date and text information.

20       8. The data structure of claim 1, wherein said record information includes video information, and the information of said entry point includes presentation time information of the entry point of said video information.

25       9. The data structure of claim 1, wherein said record information includes still picture information, and

      the information of said entry point includes number information of the entry point of said still

picture information.

10. The data structure of claim 1, wherein said record information includes audio information, and the information of said entry point includes information of the entry point of said audio information.

11. The data structure of claim 1, wherein said management information includes a play list search pointer table, and said a play list search pointer table includes primary text information.

12. The data structure of claim 11, wherein said primary text information includes at least one of an information type, information date and text information.

13. The data structure of claim 1, wherein said data area stores bitstream data, said pack includes a stream packet containing said bitstream data, and

20 said stream packet includes one or more application packet, each said application packet being associated with a predetermined time stamp, and wherein when said entry point is assigned to any of said application packet, the information of said entry point includes information of arrival time of the application packet with said entry point.

14. The data structure of claim 13, wherein the

information of said entry point includes primary text information for describing information relating to selected one or more of the entry points.

5       15. The data structure of claim 14, wherein said primary text information includes at least one of an information type, information date and text information.

10       16. The data structure of claim 13, wherein the information of said entry point includes entry point type information.

17. An information medium being able to store said record information according to the data structure of claim 1.

15       18. The information medium of claim 17, wherein said medium is formed of an optical disc or a semiconductor memory device.

19. A method for entering one or more entry points using an information medium,

20       wherein said information medium has a data area and its management area,

said data area is used for storing data in a form of one or more objects,

each said object includes one or more data units,

25       said data unit includes record information in a form of one or more packs, said record information being presented within a prescribed period of time,

said management area includes management

information for managing said objects,

said management information includes program chain information for specifying an order of presentation of said objects,

5       said program chain information includes one or more pieces of cell information, and

      said cell information has an area for describing information of one or more entry points, each said entry point indicating a position to enter said record information.

10       said method comprising a process for entering said entry points with a predetermined time interval when said record information is recorded in the data area of said information medium.

15       20. A method for entering one or more entry points using an information medium,

      wherein said information medium has a data area and its management area,

      said data area is used for storing data in a form of one or more objects,

20       each said object includes one or more data units, said data unit includes record information in a form of one or more packs, said record information being presented within a prescribed period of time,

25       said management area includes management information for managing said objects,

      said management information includes program chain

information for specifying an order of presentation of said objects,

said program chain information includes one or more pieces of cell information, and

5        said cell information has an area for describing information of one or more entry points, each said entry point indicating a position to enter said record information.

said method comprising a process for entering said  
10        entry points in response to an instruction from a recorder for recording information on said information medium or from a user of this recorder.

21. A method for reproducing information from an information medium,

15        wherein said information medium has a data area and its management area,

said data area is used for storing data in a form of one or more objects,

each said object includes one or more data units,

20        said data unit includes record information in a form of one or more packs, said record information being presented within a prescribed period of time,

said management area includes management information for managing said objects,

25        said management information includes program chain information for specifying an order of presentation of said objects,

said program chain information includes one or more pieces of cell information,

said cell information has an area for describing information of one or more entry points, each said  
5 entry point indicating a position to enter said record information,

said management information further includes a movie AV file information table,

said a movie AV file information table includes  
10 one or more pieces of movie VOB information,

said movie VOB information includes time map information,

said method comprising:

reading information of said entry point from said  
15 management information; and

when a presentation or playback of specific one or ones of said entry points is required, converting a presentation time of the specific entry point to a corresponding file access pointer using said time map  
20 information in order to access said specific entry point.

22. A method for inputting text information using an information medium,

wherein said information medium has a data area  
25 and its management area,

said data area is used for storing data in a form of one or more objects,



each said object includes one or more data units,  
said data unit includes record information in a  
form of one or more packs, said record information  
being presented within a prescribed period of time,

5        said management area includes management  
information for managing said objects,

      said management information includes program chain  
information for specifying an order of presentation of  
said objects,

10       said program chain information includes one or  
more pieces of cell information, and

      said cell information has an area for describing  
information of one or more entry points, each said  
entry point indicating a position to enter said record  
15       information, the information of one or more said entry  
points being associated with primary text information,

      said method comprising:

      reading the information of one or more said entry  
points from said management information;

20       inputting text information with respect to a  
selected one of said entry points; and

      changing contents of said primary text information  
according to the input text information.

25       23. A method for displaying a menu using an  
information medium,

      wherein said information medium has a data area  
and its management area,

said data area is used for storing data in a form of one or more objects,

each said object includes one or more data units,

said data unit includes record information in a

5 form of one or more packs, said record information being presented within a prescribed period of time,

said management area includes management information for managing said objects,

said management information includes program chain  
10 information for specifying an order of presentation of said objects,

said program chain information includes one or more pieces of cell information, and

said cell information has an area for describing  
15 information of one or more entry points, each said entry point indicating a position to enter said record information, the information of one or more said entry points being associated with primary text information,

said method comprising:

20 reading the information of one or more said entry points from said management information;

reading the primary text information from the read entry point information; and

displaying a menu being associated with a text or  
25 texts with respect to the information of one or more said entry points.

24. A method for displaying an erasure or delete

menu using an information medium,

wherein said information medium has a data area  
and its management area,

5 said data area is used for storing data in a form  
of one or more objects,

each said object includes one or more data units,  
said data unit includes record information in a  
form of one or more packs, said record information  
being presented within a prescribed period of time,

10 said management area includes management  
information for managing said objects,

said management information includes program chain  
information for specifying an order of presentation of  
said objects,

15 said program chain information includes one or  
more pieces of cell information, and

said cell information has an area for describing  
information of one or more entry points, each said  
entry point indicating a position to enter said record  
20 information, the information of one or more said entry  
points being associated with primary text information,

said method comprising:

reading the information of one or more said entry  
points from said management information;

25 reading the primary text information from the read  
entry point information; and

displaying a menu having information with respect

to an order of erasure of the record information according to the read entry point information and the read primary text information.

25. The method of claim 24, further comprising:  
5 changing said order of erasure of the record information via the displayed menu.

26. The method of claim 24, further comprising:  
setting said order of erasure of the record information to an erasure prohibited state, via the  
10 displayed menu.

27. A method for searching information of an information medium,

wherein said information medium has a data area and its management area,

15 said data area is used for storing data in a form of one or more objects,

each said object includes one or more data units,

said data unit includes record information in a form of one or more packs, said record information  
20 being presented within a prescribed period of time,

said management area includes management information for managing said objects,

said management information includes program chain information for specifying an order of presentation of  
25 said objects,

said program chain information includes one or more pieces of cell information, and

said cell information has an area for describing  
information of one or more entry points, each said  
entry point indicating a position to enter said record  
information, the information of one or more said entry  
5 points being associated with primary text information,

said method comprising:

inputting a key word or key words for searching;

searching the primary text information containing  
said key word or key words from said management  
10 information; and

displaying a result of the searching.

28. A method for entering defect of an information  
medium,

wherein said information medium has a data area  
15 and its management area,

said data area is used for storing data in a form  
of one or more objects,

each said object includes one or more data units,

said data unit includes record information in a  
20 form of one or more packs, said record information  
being presented within a prescribed period of time,

said management area includes management  
information for managing said objects,

said management information includes program chain  
25 information for specifying an order of presentation of  
said objects,

said program chain information includes one or

more pieces of cell information, and

said cell information has an area for describing  
information of one or more entry points, each said  
entry point indicating a position to enter said record  
5 information.

said method comprising:

reproducing the record information from said data  
area;

10 when the reproduced information contains a  
defective portion, entering entry point information of  
a start point of the defective portion as well as entry  
point information of an end point of that defective  
portion.

15 29. A recordable/reproducible digital information  
medium having a volume space including a data area and  
its management area, wherein

data is stored in said data area in a form of one  
or more objects,

20 each said object includes one or more data units,  
said data unit includes record information of  
video or audio in a form of one or more packs, said  
record information being presented within a prescribed  
period of time,

25 said management area includes management  
information for managing said objects,

said management information includes program chain  
information for specifying an order of presentation of

said objects,

said program chain information includes one or more pieces of program information and one or more pieces of cell information,

5       said cell information includes specific information for specifying the object to be presented,

said specific information records entry point information for describing an entry point of the object to be reproduced, and

10       said entry point information further includes information relating to the entry point.

30. A digital video information recording/reproducing apparatus using a recordable/reproducible information medium having management information for managing objects as record information, wherein said management information includes movie cell information,

15       said apparatus comprising:  
an entry point setting portion for setting a prescribed entry point at said movie cell information;  
20       an additional information input portion for inputting additional information with respect to said entry point; and

an additional information setting portion for setting the input additional information at said entry point.  
25

31. A method for entering an entry point using

a recordable/reproducible information medium having management information for managing objects as record information, wherein said management information includes movie cell information,

5        said method comprising:

      setting a prescribed entry point at said movie cell information;

      inputting additional information with respect to said entry point; and

10        setting the input additional information at said entry point.